

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
30 September 2004 (30.09.2004)

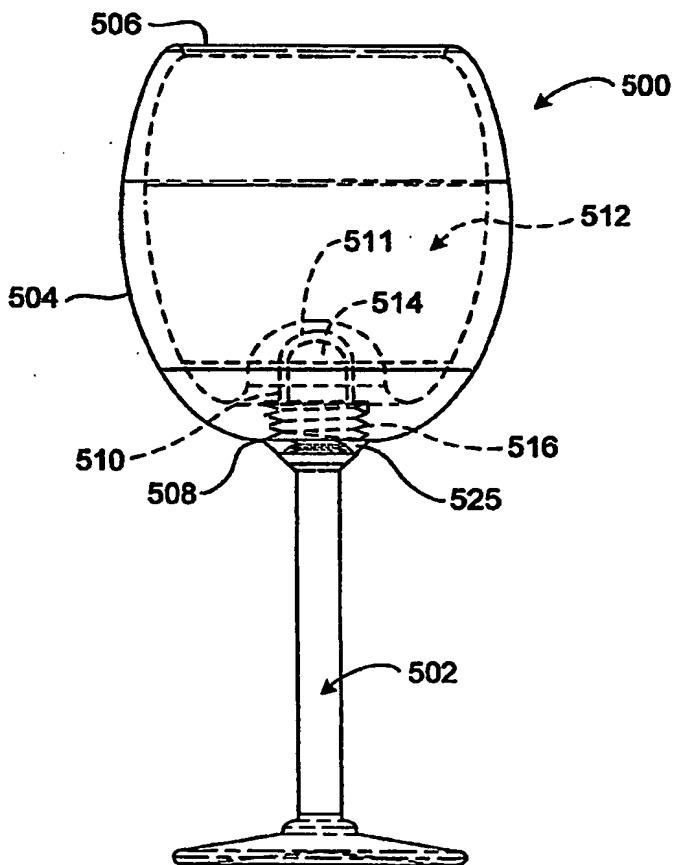
PCT

(10) International Publication Number  
**WO 2004/082441 A3**

- (51) International Patent Classification<sup>7</sup>: **F25D 03/08**
- (21) International Application Number:  
PCT/US2004/007746
- (22) International Filing Date: 11 March 2004 (11.03.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
10/389,733 14 March 2003 (14.03.2003) US  
10/712,170 12 November 2003 (12.11.2003) US
- (71) Applicants and  
(72) Inventors: CITRYNELL, Andrew [US/US]; 264 Sunrise Lane, Carbondale, Colorado 81623 (US). MILLER, Kimberly, Ann [US/US]; 264 Sunrise Lane, Carbondale, Colorado 81623 (US). SCHWARZE, Joel [US/US]; 19266 Sioux Hills Rd., Hutchinson, Minnesota 55350 (US).
- (74) Agents: GIBBY, Darin, J. et al.; Townsend and Townsend and Crew LLP, Two Embarcadero Center, Eighth Floor, San Francisco, California 94111-3834 (US).
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,

[Continued on next page]

(54) Title: DRINKING VESSELS WITH REMOVABLE COOLING DEVICES



(57) Abstract: In one embodiment, a beverage container comprises a vessel having an interior that is adapted to hold a beverage. The vessel has a closed bottom end and an open top end. The bottom end defines a cavity that is fluidly sealed from the interior of the vessel. A cooling element is configured to be coupled to the vessel and to fit within the cavity. A base comprises a bottom member and a stem extending vertically upward from the bottom member. The base includes a connector that is configured to be coupled to the cooling element or vice versa.



GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,  
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:  
4 August 2005

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/07746

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F25D 03/08

US CL : 62/457.3, 530

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 62/457.3, 530, 457.4, 457.1, 371, 438, 529; 220/709, 739

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,474,096 B1 (DE LA GUARDIA) 5 November 2002 (05.11.2002), see entire document.	1,14
A	US 5,597,087 A (VINARSKY) 28 January 1997 (28.01.1997), see entire document.	1,14
A	US 5,467,877 A (SMITH) 21 November 1995 (21.11.1995), see entire document.	1,14
A	US 5,189,892 A (ROBERTS) 2 March 1993 (02.03.1993), see entire document.	1,14
A	US 5,044,173 A (CHENG) 3 September 1991 (03.09.1991), see entire document.	1,14
A	US 4,765,393 A (BAXTER) 23 August 1988 (23.08.1988), see entire document.	1,14

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

04 May 2005 (04.05.2005)

Date of mailing of the international search report

17 JUN 2005

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Chen-Wen Jiang

Telephone No. (703) 306-5648

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/07746

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:  
Please See Continuation Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-19

Remark on Protest

☐

The additional search fees were accompanied by the applicant's protest.

☐

No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/07746

### BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In order for more than one species to be examined, the appropriate additional examination fees must be paid. The species are as follows:

Species I: beverage container having cavity, cooling element coupled to vessel, stem and tray.

Species II: beverage container having vessel, cooling element within a cavity and stem.

Species III: beverage container having vessel, hemispherical cavity, hemispherical cooling element and base connector.

Species IV: beverage container having vessel, cavity, cooling element and tray.

The claims are deemed to correspond to the species listed above in the following manner:

Species I: claims 1-19

Species II: claims 20-24

Species III: claims 25-27

Species IV: claims 28-32

The following claim(s) are generic: no claims are considered generic.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: cooling element has different coupling feature, vessel has different characteristics and container includes different limitations.